ARCADIS of New York, Inc.
6723 Towpath Road
P O Box: 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

ENVIRONMENT

PCB Coordinator
U.S. EPA Region 5
Mailstop LU-9J
77 W. Jackson Blvd
Chicago, IL 60604

Date:
September 10, 2014

Subject:
GE Aviation – Altitude Test Facility
Data Summary of Thirteenth Air Sampling Event – August 2014

Dear PCB Coordinator:

On August 18, 2014, GE Aviation, an operating division of the General Electric Company (GE), performed indoor air testing activities at the Altitude Test Facility (ATF) at GE's facility in Evendale, Ohio, in accordance with EPA's January 16, 2014 amendment to EPA's December 19, 2012 approval allowing GE to use the ATF for jet engine testing pursuant to 40 CFR § 761.62(c). This report is being submitted pursuant to Consent Agreement and Final Order (TSCA-05-2014-0008) filed on April 28, 2014.

GE collected two indoor air samples at the ATF on August 18, 2014, during active jet engine testing in August 2014 and received the laboratory report containing the results on September 3rd, 2014. Both samples were "Non-Detect" for PCBs ng/m^3, well below the NIOSH standard of 1,000 ng/m^3. (Non-Detect means that analytes were not detected at concentrations greater than the laboratory practical quantitation limit – PQL, which was 41.7 ng/m^3.) Further details for the sampling event follow in the report and **Table 1**.

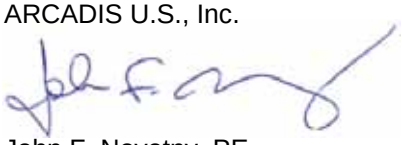
Air test sample ATF-AR-C43-08, located adjacent to the #43 Test Cell Chamber of the ATF, and air test sample ATF-AR-CR2-13, located on the second floor of the compressor room, were both collected over an 8-hour interval. The samples were collected on August 18, 2014, during routine jet engine testing activities. Both air pumps were placed in a manner such that the air sample would be collected from the breathing zone, in the room where equipment was in operation during engine tests. Both air pumps used for this event were programmed for a flow rate of 5.0 L/minute for a total run time of eight hours. Calibration and preparation of air samples followed Method TO-10A: Compendium of Methods for Toxic Organic Air Pollution. During the sampling event, a total volume of 2,400 Liters was pumped through each sample collection media.

The laboratory analytical results of the sampling event are provided in the Data Summary Table, attached as **Table 1** and the sampling locations are provided on the attached **Figure 1**. As indicated in the attachments, sample ATF-AR-C43-08 (collected adjacent to Test Cell #43) had "non-detect" levels of PCBs ng/m^3, and sample ATF-AR-CR2-13 (collected from the second floor ATF compressor room had "non-detect" levels of PCBs ng/m^3. The laboratory quantitation limit (PQL) for these results was 41.7 ng/m^3, with a final extraction volume of 5.0 mL. The specific operating parameters of the analytical instruments used by PACE Analytical during sample analysis are detailed in **Attachment 1**.

Please do not hesitate to contact John Rumpf, Counsel for Environmental Affairs at GE Aviation, at (513) 243-4256 or Christopher Bell at Greenberg Traurig LLP at (713) 374-3556 if you have any questions.

Sincerely,

ARCADIS U.S., Inc.



John F. Novotny, PE
Senior Engineer

Attachments
Table 1
Figure 1
Attachment 1

Copies:
John Rumpf, GE
Christopher Bell, Greenberg Traurig, LLP

ARCADIS

Table 1

Table 1
Data Summary - PCB Air Monitoring - August 2014

GE - Aviation - Altitude Test Facility
Cincinnati, Ohio

Sampling ID	Date Collected	Time Collected	Sample Type	Total PCBs (ng/m^3)	Location Description
Event 13					
ATF-AR-C43-07	8/18/2014	15:15	Air	ND	Test Cell 43 open floor area
ATF-AR-CR2-12	8/18/2014	15:20	Air	ND	Second floor of ATF Compressor Room

Notes:

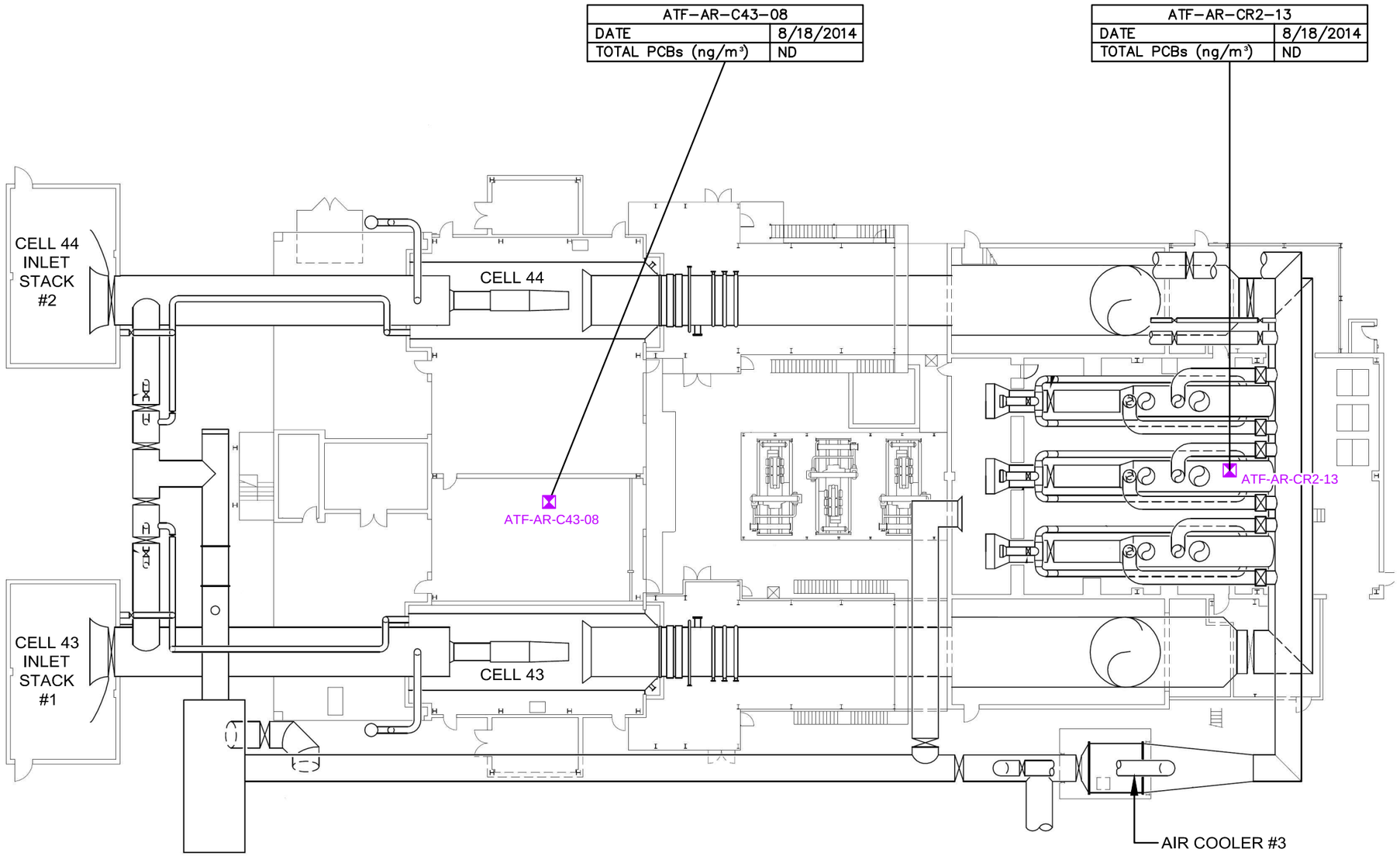
1. Samples collected by ARCADIS personnel and submitted to Pace Analytical Laboratory for analysis using USEPA Compendium Method TO-10A procedures.
2. Air pumps were set up at breathing zone height and operated over an 8-hour interval at an air intake rate of approximately 5 L/min, resulting in approximately 2,400 L of air pulled through the puff for each sample.
3. Event 12 took place at the ATF on August 18, 2014 conducting prior to jet engine testing in July 2014.
4. Total PCBs - the sum of aroclors 1016 through 1268
5. The final extraction volume of 5.0 mL was conducted by the laboratory.
6. The initial injection volume of 1µL was conducted by the laboratory.
7. the Laboratory determined no sample breakthrough occurred on all sample media.
8. ND (Non-Detect) - Denotes analyte not detected at a concentration greater than the MDL
9. PQL (Practical Quantitation Limit) of 41.7 ng/m^3 per aroclor. Denotes lowest analyte concentration reportable for the sample.
10. Time Collected, denotes the time which the air pumps completed the 8-hour run interval.
11. J - Denotes an estimated concentration. The concentration result is greater than or equal to the Method Detection Limit (MDL) but less than the PQL.

Abbreviations:

ATF - Altitude Test Facility
AR - PCB air sample
C43 - Test Cell #43
CR2 - compressor room-second floor
PCBs - polychlorinated biphenyls
ng/m^3 - nanograms per cubic meter

ARCADIS

Figure 1



NOT TO SCALE

LEGEND:

- AMBIENT PCB AIR MONITORING LOCATION

SAMPLING NOMENCLATURE:

ATF – ALTITUDE TEST FACILITY

AR – PCB AIR SAMPLE

C43 – TEST CELL #43

CR2 – COMPRESSOR ROOM SECOND FLOOR

NOTES:

1. SAMPLING LOCATIONS ARE APPROXIMATE.
2. ng/m³ – NANOGRAMS PER CUBIC METER
3. TOTAL PCBs – THE SUM OF AROCLORS 1016 THROUGH 1268.
4. J – DENOTES AN ESTIMATED CONCENTRATION. THE CONCENTRATION RESULT IS GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT (MDL) BUT LESS THAN THE PQL.

GE-AVIATION
CINCINNATI, OHIO
AIR TEST SUMMARY REPORT

DATA SUMMARY - PCB RESULTS AMBIENT PCB AIR MONITORING

ARCADIS

FIGURE 1

ARCADIS

Attachment 1

GC-10 8082 High Level Method - Hydrogen

GC #:	**10**
Method:	**Hydrogen 8082**
GC Method #:	**2**
Date:	**2/15/2013**
Analyst:	**MCA**
File Name:	
Column:	**Front ZB-1 MS 20m 0.18 0.18**
	Middle ZB-5 20m 0.18 0.18

Sample Delivery: SEE LEAP PARAMETERS

Column Oven:

Step	Temp (°C)	Rate (°C/min)	Hold (min)	Total (min)
Initial	150		1.41	1.41
	290	17.5	0.65	10.06

Stabilization Time (min): 0.5

Injector: Front CP-1177

1177 Oven Power: ON
1177 Temperature (°C) 300

Time	Split State	Split Ratio
Initial	ON	30

Injector: Middle CP-1177

1177 Oven Power: ON
1177 Temperature (°C) 300

Time	Split State	Split Ratio
Initial	ON	30

Flow/PSI(Front EFC, Type 1):

Carrier Gas Hydrogen

Step	Pres (psi)	Rate (psi/min)	Hold (min)	Total (min)
Initial	*		10.00	10.00

Constant Flow Mode Enable: NO
Column Flow Rate (ml/min): 2.1

Flow/PSI(Front EFC, Type 1):

Step	Pres (psi)	Rate (psi/min)	Hold (min)	Total (min)
Initial	*		10.00	10.00

Constant Flow Mode Enable: NO
Column Flow Rate (ml/min): 2.1

Detector: **Front ECD**

ECD Oven Power: ON
Temperature (°C) 300
Electronics: ON
Range: 1

Time	Range	Autozero
Initial	1	YES

Middle ECD

ECD Oven Power: ON
Temperature (°C) 300
Electronics: ON
Range: 1

Time	Range	Autozero
Initial	1	YES

Front ECD Adjustment

Time Constant:	Fast	Fast
Cell Current:	CAP	CAP
Contact Potential (mV):	*	*
Make-Up Flow (ml/min):	35.0	35.0

*values may change with use

Analog Output

Detectors: Front: ECD Attenuation 1
Middle: ECD Attenuation 1
Rear: None

Time	Signal Source	Attenuation
Initial	Front Detector	1
Time	Signal Source	Attenuation
Initial	Middle Detector	1
Time	Signal Source	Attenuation
Initial	Rear Detector	1

Valve Table:

Time	1 None	2 None	3 None	4 None	5 None	6 None	7 None
Initial	-----	-----	-----	-----	-----	-----	-----

Initial valve state=Off

Heated Zones

Zone	Type	Temp Limit	Location	Coolant
Col. Oven	Col. Oven	350C	Col. Oven	None
1	1177	350C	Front	None
2	1177	350C	Middle	None
3	None	450C	None	None
4	ECD	350C	Front	None
5	ECD	350C	Middle	None
6	None	450C	None	None

Column Parameters:

Location	Carrier	Length	ID
Front	H	20 m	180
Middle	H	20 m	180

6